



Model No.:	Stock No.:
Serial No.:	
Purchased from:	
Date purchased:	

# Operating Instructions and Parts Manual

## 2-1/4 Ton Short Chassis Service Jack

Model JSJ-2-1/4XA



**JET**  
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**Part No. M-454226**  
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# 1.0 Warranty and Service

JET warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

## Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

## Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

## What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance.

## Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

## How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

## More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

## How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

## Limitations on This Warranty

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

JET SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

JET sells through distributors only. The specifications listed in JET printed materials and on official JET website are given as general information and are not binding. JET reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever. JET® branded products are not sold in Canada by JPW Industries, Inc.

## Product Listing with Warranty Period

90 Days – Parts; Consumable items; Light-Duty Air Tools
1 Year – Motors; Machine Accessories; Heavy-Duty Air Tools; Pro-Duty Air Tools
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools

NOTE: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.

## 2.0 Table of contents

Section	Page
1.0 Warranty and Service.....	2
2.0 Table of contents.....	3
3.0 Safety warnings.....	4
4.0 About this manual .....	4
5.0 Specifications .....	5
6.0 Assembly.....	6
7.0 Lubrication.....	6
8.0 Operating instructions .....	6
8.1 Raising the jack.....	6
8.2 Lowering the jack .....	6
9.0 Maintenance.....	6
10.0 Troubleshooting the JSJ-2-1/4XA Service Jack.....	7
11.0 Replacement Parts.....	7
11.1.1 Main Body Assembly (2-1/4T Short Chassis Service Jack) – Exploded View.....	8
11.1.2 Main Body Assembly (2-1/4T Short Chassis Service Jack) – Parts List .....	9
11.2.1 Power Unit Assembly (2-1/4T Short Chassis Service Jack) – Exploded View.....	10
11.2.2 Power Unit Assembly (2-1/4T Short Chassis Service Jack) – Parts List.....	11



## 3.0 Safety warnings

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the jack and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace warning labels if they become obscured or removed.
4. This is a lifting device only. Do not move or dolly the vehicle while on the jack. The load shall be supported immediately by jack stands, or other appropriate means.
5. Inspect jack before each use. Do not use jack if it is damaged, has been altered or parts have loosened.
6. Do not exceed rated lift capacity. Overloading can cause damage to, or failure of, the jack.
7. Always center load on saddle.
8. Do not introduce blocks or other items between load and jack saddle.
9. Lift only on areas of the vehicle specified by the vehicle manufacturer.
10. This jack is designed for use on hard, level surfaces capable of sustaining the load. Use on other than hard, level surfaces can result in jack instability and possible loss of load.
11. Clear obstructions from around jack area, such as tools, gravel, etc., before lifting.
12. Do not get under vehicle while jack is being used as the only support.
13. If jack needs service, contact JET Consumer Relations at 1-800-274-6848, or visit [www.jettools.com](http://www.jettools.com), for the location of your nearest JET Authorized Service Center.
14. Jack service must be performed by qualified personnel only. Use only genuine JET factory replacement parts; use of unauthorized parts may cause risk of injury, and may void warranties.
15. Use only approved hydraulic fluid (ISO 32 hydraulic oil, or "jack oil"). Use of other fluids, such as brake fluid or transmission oil, can damage seals and cause possible jack failure.
16. Do not modify the jack.
17. Failure to comply with all of these warnings may result in loss of load, damage to jack, and/or failure resulting in personal injury or property damage.

## 4.0 About this manual

This manual is provided by JET covering the safe operation and maintenance procedures for a JET Model JSJ-2-1/4XA Short Chassis Service Jack. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your jack has been designed and constructed to provide years of trouble-free operation if used in accordance with the instructions as set forth in this document.

If there are questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: [www.jettools.com](http://www.jettools.com).

Retain this manual for future reference. If the jack transfers ownership, the manual should accompany it.

## 5.0 Specifications

Model number .....	JSJ-2-1/4XA
Stock number .....	454226
Rated Capacity .....	2-1/4 Ton
Strokes to reach maximum height without load .....	2 to 3
Regulating pressure .....	73.5 MPa
Maximum Height – A .....	18.7" (475mm)
Minimum Height – B .....	5.3" (135mm)
Saddle Diameter – D .....	4" (100mm)
Overall Length – C .....	26.5" (672mm)
Overall Width – E .....	13.4" (340mm)
Handle Length (two pieces) – F .....	39.4" (1000mm)
Net Weight .....	71.6 lb (32.5kg)
Shipping Weight .....	75 lb (34kg)

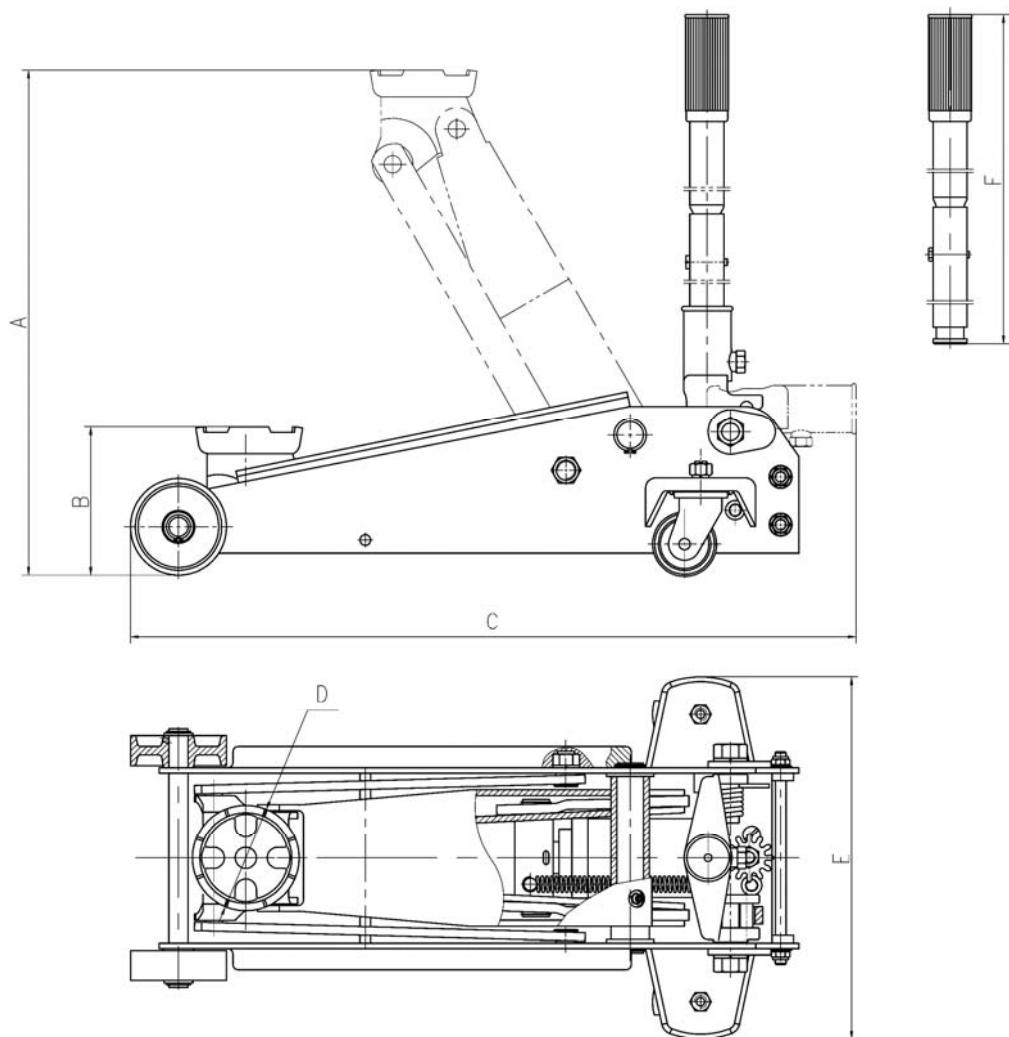


Figure 1

*The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.*

## 6.0 Assembly

Numbers in parenthesis (#) refer to parts breakdown, page 6:

1. Insert Upper Handle (30) into Lower Handle (29) and fasten with Hex Cap Bolt (28).
2. Remove Handle Bolt (25).
3. Insert handle assembly into Handle Socket (23). Make sure handle assembly engages Gear Shaft (27) by turning handle back and forth and observing movement of Handle Socket Gear (26).
4. Install Handle Bolt (25) to secure handle assembly.

## 7.0 Lubrication

**Note:** Lubricate before initial operation, and periodically to ensure smooth operation. Lubricate jack at points 1 through 6, as indicated in Figure 1.

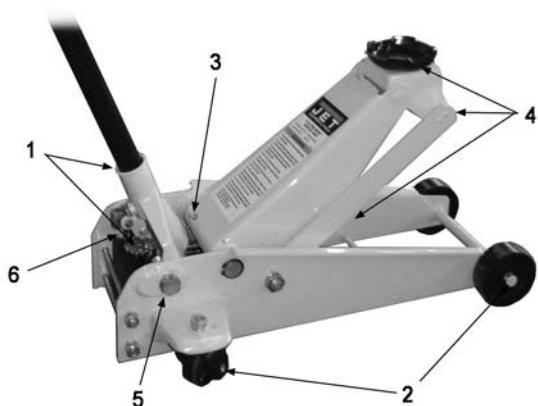


Figure 1 – Lubrication points

1. Handle: Use #2 tube grease on release valve gears below handle and lightly grease handle at point where it fits into socket.
2. Wheels: Use 30W oil on axles and caster bearings.
3. Lifting Arm: Inject #2 tube grease into grease fitting.
4. Saddle and linkage: Use 30W oil on all moving and pivoting parts.
5. Handle socket pivot bolts: Lubricate with 30W oil.
6. Plunger and plunger pin: Use #2 tube grease to lubricate connection between pump plunger and pin in handle socket.

## 8.0 Operating instructions

**Important:** During shipment and handling, air sometimes gets into the hydraulic system causing poor lifting performance. Before initial operation, purge any air from system by fully opening pump release valve (turn handle counter-clockwise). Then, while holding saddle down, pump handle rapidly several times.

### 8.1 Raising the jack

1. Close release valve by turning handle clockwise until resistance is felt. Do not over tighten.
2. Place jack directly under object to be lifted, and pump handle to raise saddle to contact point. Make sure saddle accepts weight firmly and centrally.
3. Check positioning under slight load to confirm jack or load will not slip, or move suddenly.
4. Raise jack by pumping handle until desired height is reached.
5. After lifting, secure and transfer load to jack stands or other appropriate means. **Do not use jack as the only means of support.**

### 8.2 Lowering the jack

Slowly turn handle counter-clockwise. Speed of descent is controlled by amount release valve is turned.

## 9.0 Maintenance

Store jack in a safe and dry environment, away from children or unauthorized personnel. Always store jack in fully lowered position, with handle in upright position.

Keep jack clean and properly lubricated.

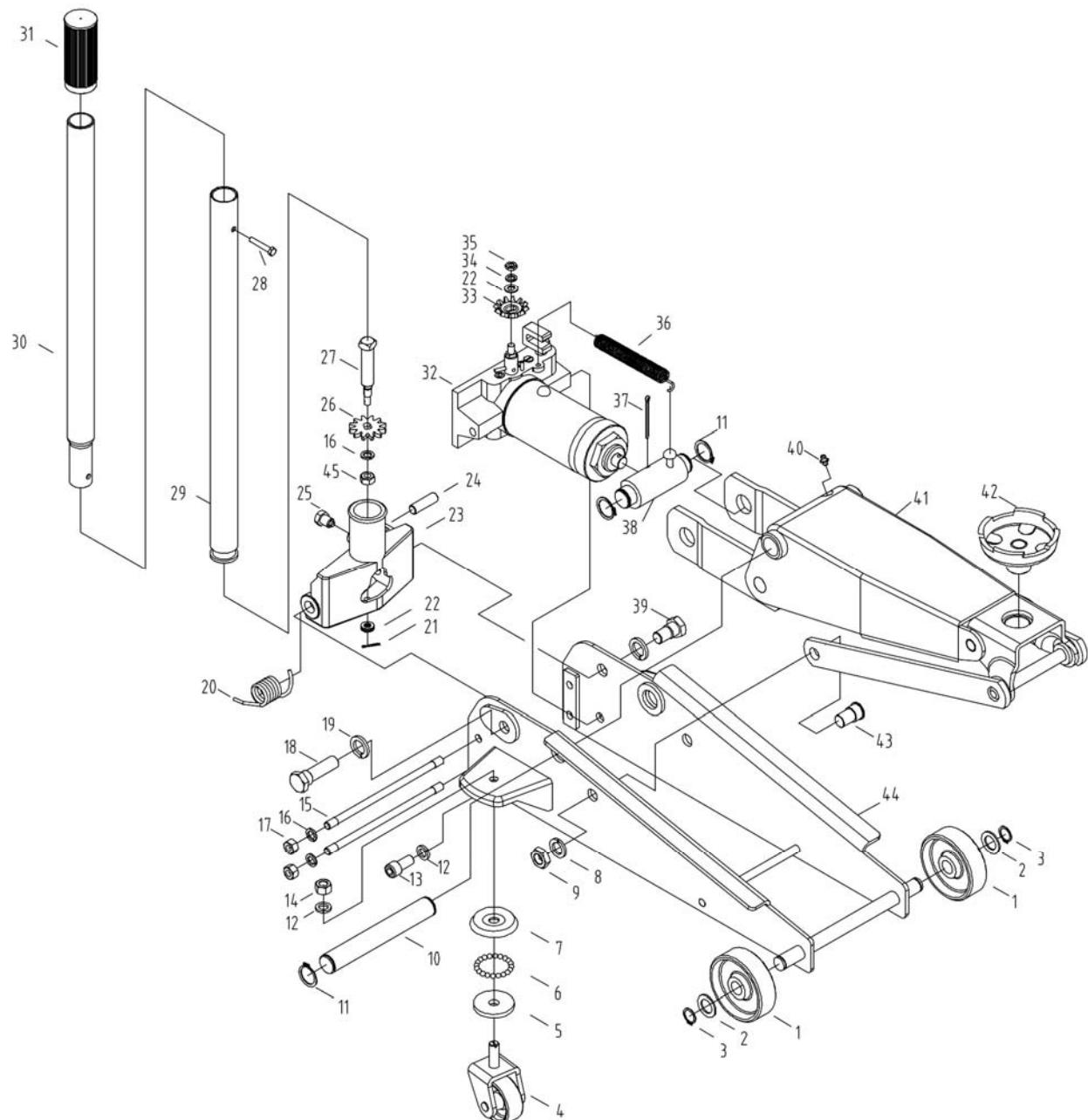
## 10.0 Troubleshooting the JSJ-2-1/4XA Service Jack

Symptom	Possible Cause	Correction
Jack fails to lift load, or only partially lifts.	Release valve open.	Close valve by rotating handle clockwise.
	Weight capacity exceeded.	Use other lifting equipment; load must not exceed rated capacity of jack.
	Low hydraulic fluid.	With jack on level ground, lower saddle completely. Remove fill plug and check oil level. Fill as needed with approved hydraulic fluid. Reinstall fill plug.
Jack fails to rise to height limit.	Low hydraulic fluid.	With jack on level ground, lower saddle completely. Remove fill plug and check oil level. Fill as needed with approved hydraulic fluid. Reinstall fill plug.
Jack fails to hold load in raised position.	Release valve open.	Close valve by rotating handle clockwise.
Jack oil leaks	Reservoir overfilled.	Drain some oil from reservoir.
	Seals are worn.	Have seals replaced by authorized service center.
Handle won't pump full stroke.	Air in system.	Bleed air from system by opening release valve and pumping handle several times.

## 11.0 Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday (see our website for business hours, [www.jettools.com](http://www.jettools.com)). Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

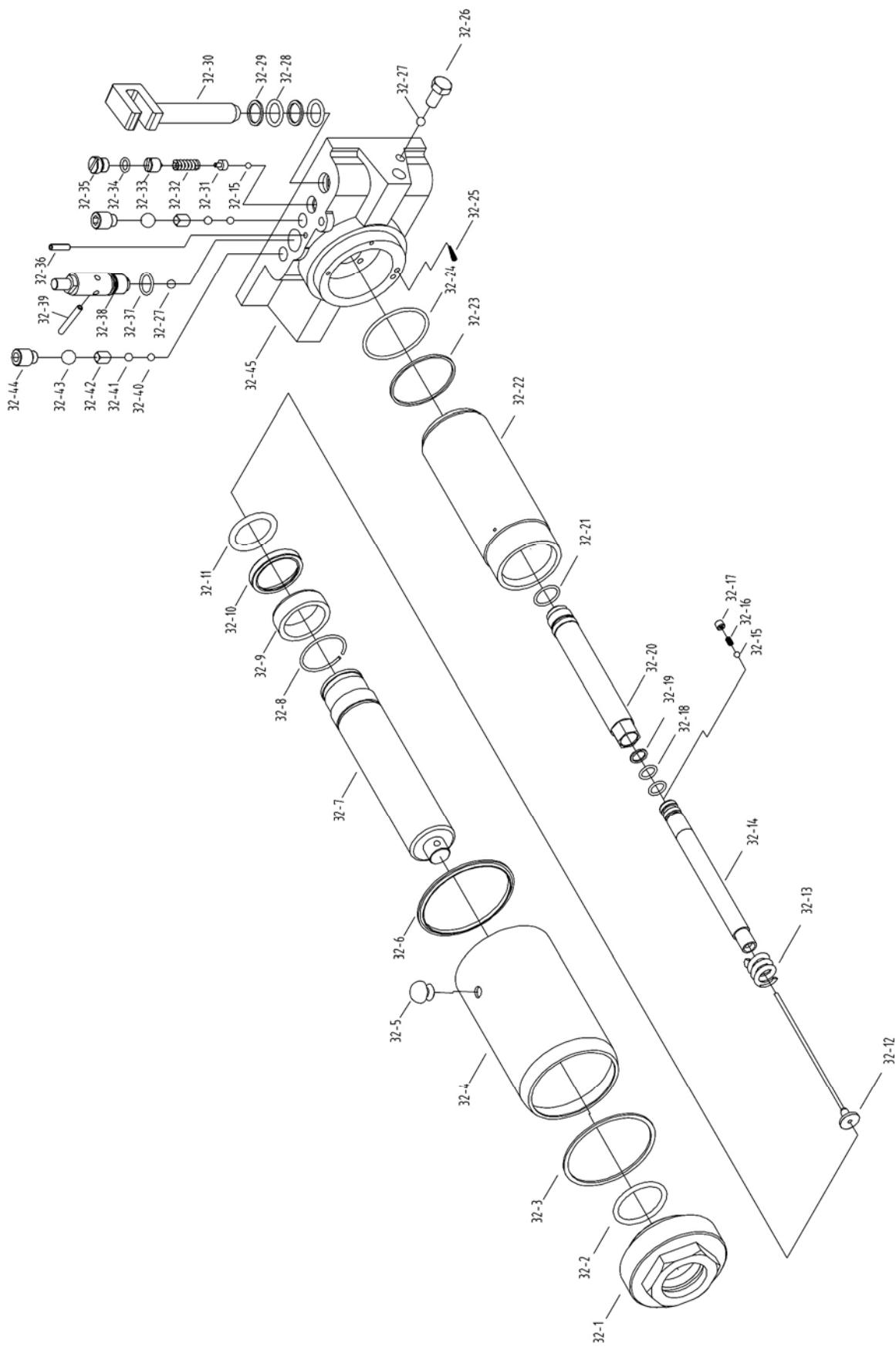
### 11.1.1 Main Body Assembly (2-1/4T Short Chassis Service Jack) – Exploded View



### 11.1.2 Main Body Assembly (2-1/4T Short Chassis Service Jack) – Parts List

Index No	Part No	Description	Size	Qty
1	JSJ21/4XA-01	Front Caster		2
2	JSJ3XA-02	Washer	18mm	2
3	JSJ3XA-03	C-Clip	18mm	2
4	JSJ3S-07	Swivel Caster Assembly		2
5	JSJ3S-08	Ball Ring		2
6	JSJ3S-09	Steel Ball	6.35mm	38
7	JSJ3S-10	Ball Cover		2
8	JSJ3S-05	Lock Washer	16mm	2
9	JSJ3S-06	Hex Nut	M16	2
10	JSJ21/4XA-10	Arm Shaft		1
11	JSJ3S-14	C-Clip	25mm	4
12	JSJ3S-11	Lock Washer	12mm	4
13	JSJ3S-12	Screw	M12x25	2
14	JSJ3S-18	Hex Nut	M12	2
15	JSJ21/4XA-15	Shaft		2
16	JSJ3S-16	Washer	10mm	5
17	JSJ21/4XA-17	Lock Nut	M10	4
18	JSJ3S-19	Bolt	M18	1
19	JSJ3S-20	Lock Washer	18mm	2
20	JSJ3S-26	Torsion Spring		1
21	JSJ3S-21	Pin	2x16mm	1
22	JSJ3S-22	Washer	8mm	4
23	JSJ3S-27	Handle Socket		1
24	JSJ3S-24	Pin		1
25	JSJ3S-25	Bolt		1
26	JSJ3S-23	Release Valve Gear		1
27	JSJ3S-29	Screw		1
28	JSJ3S-31	Bolt	M6x35	1
29	JSJ3S-32	Lower Handle		1
30	JSJ3S-34	Upper Handle		1
31	JSJ3S-33	Handle Grip		1
32	JSJ21/4XA-32	Power Unit Assembly		1
33	JSJ3XA-33	Gear		1
34	JSJ3XA-34	Washer	8mm	1
35	JSJ3XA-35	Nut	M8	1
36	JSJ3S-42	Return Spring		1
37	JSJ3S-41	Pin	4x50mm	1
38	JSJ21/4XA-38	Connecting Bar		1
39	JSJ3XA-39	Screw		1
40	JSJ3S-39	Grease Fitting	M6	1
41	JSJ21/4XA-41	Lifting Arm Assembly		1
42	JSJ21/4XA-42	Saddle		1
43	JSJ21/4XA-43	Bolt		3
44	JSJ21/4XA-44	Side Plate Assembly		1
45	JSJ3S-15	Hex Nut	M10	1
	JSJ21/4XA-WL	I.D./Warning Label (not shown)		1

### 11.2.1 Power Unit Assembly (2-1/4T Short Chassis Service Jack) – Exploded View



## 11.2.2 Power Unit Assembly (2-1/4T Short Chassis Service Jack) – Parts List

Index No	Part No	Description	Size	Qty
.....	JSJ21/4XA-32	Power Unit Assembly (includes 32-1 thru 32-45) .....		1
32-1	JSJ21/4XA-321	Cylinder Cover .....		1
32-2	JSJ21/4XA-322	O-Ring *		1
32-3	JSJ21/4XA-323	Seal Ring *		1
32-4	JSJ21/4XA-324	Oil Tank .....		1
32-5	JSJ21/4X-57	Oil Fill Plug *		1
32-6	JSJ21/4X-54	O-Ring *		1
32-7	JSJ21/4XA-327	Ram .....		1
32-8	JSJ21/4XA-328	Retainer *		1
32-9	JSJ21/4XA-329	Piston Ring .....		1
32-10	JSJ21/4XA-3210	Washer *		1
32-11	JSJ21/4XA-3211	O-Ring *		1
32-12	JSJ21/4XA-3212	Pin.....		1
32-13	JSJ21/4XA-3213	Spring .....		1
32-14	JSJ21/4XA-3214	Ram Rod.....		1
32-15	SB-4MM	Steel Ball.....	4mm.....	2
32-16	JSJ21/4XA-3216	Spring .....		1
32-17	JSJ21/4XA-3217	Screw.....		1
32-18	JSJ21/4XA-3218	O-Ring *		2
32-19	JSJ21/4XA-3219	Retainer *		1
32-20	JSJ21/4XA-3220	Ram .....		1
32-21	JSJ21/4XA-3221	Seal Ring *		1
32-22	JSJ21/4XA-3222	Cylinder.....		1
32-23	JSJ21/4X-88	Back Up Ring *	Ø50.2 x ø47 x 1.6 .....	1
32-24	JSJ21/4X-89	O-Ring *	Ø46.5 x ø2.4 .....	1
32-25	JSJ21/4X-100	Filter.....		2
32-26	JSJ21/4XA-3226	Screw.....	M8x16 .....	3
32-27	SB-6MM	Steel Ball.....	6mm.....	4
32-28	JSJ21/4X-83	O-Ring *	Ø14 x ø2.65 .....	2
32-29	JSJ21/4XA-72	Back Up Ring *	Ø18 x ø14 x 1.5 .....	2
32-30	JSJ21/4X-75	Piston Pump .....	Ø14 .....	1
32-31	JSJ21/4X-80	Adaptor .....		1
32-32	JSJ21/4X-81	Spring .....		1
32-33	JSJ21/4X-69	Adjustment Screw.....		1
32-34	JSJ21/4XA-3234	O-Ring *		1
32-35	JSJ21/4XA-3235	Screw.....		1
32-36	JSJ21/4XA-3236	Pin.....	4x16 .....	1
32-37	JSJ21/4XA-3237	O-Ring *	12.5 x 1.8 .....	1
32-38	JSJ21/4XA-3238	Release Valve Rod .....		1
32-39	JSJ21/4XA-3239	Pin.....	4x30 mm .....	1
32-40	JSJ21/4XA-3240	Steel Ball.....	5.5mm.....	2
32-41	SB-8MM	Steel Ball.....	8mm.....	2
32-42	JSJ21/4XA-3242	Square Block .....		2
32-43	SB-10MM	Steel Ball.....	10mm.....	2
32-44	JSJ21/4XA-3244	Screw.....	M12x16x3 .....	2
32-45	JSJ21/4XA-3245	Valve Assembly .....		1
.....	JSJ21/4XA-SK	Seal Kit (contains items with asterisk * ).		



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